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Applicant's Docket No. 1012-188(2003-011R1)

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Kolosov et al.  
Serial No.: 10/804,379  
Filed: 03/19/2004  
For: RESONATOR SENSOR ASSEMBLY

Group Art Unit: 2855  
Examiner: Unknown

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

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Applicants submit this statement in accordance with their duty of disclosure under 37 CFR 1.56 and 1.97-1.98. The submission made herewith is in no way intended as an admission that the cited items constitute material prior art or otherwise would render the claims unpatentable in any way. The submission also is in no way intended to substitute for the Examiner's own independent investigation.

A listing of the references on forms PTO/SB/08A and PTO/SB/08B are submitted herewith. Copies of the U.S. references have not been provided because its filing date falls after June 30, 2003. Applicants respectfully solicit the Examiner's consideration of the cited references and entry thereof into the record of this application.

If additional fees are due with the filing of this paper, please charge the amount to deposit account 50-0496.

Date: 11/04/04

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# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 1

**Complete if Known**

Application Number	10/804,379
Filing Date	03/19/2004
First Named Inventor	Kolosov et al.
Group Art Unit	2855
Examiner Name	
Attorney Docket Number	1012-188

## U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
		3,622,968		Silverman	11/23/1971	
		3,718,032		Gray	02/27/1973	
		3,778,757		Houston	12/11/1973	
		4,342,936		Marcus et al.	08/03/1982	
		4,349,881		November et al.	09/14/1982	
		4,370,662		Hou et al.	01/1983	
		4,391,338		Patashnick et al.	07/05/1983	
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		4,741,200		Hammerle	05/03/1988	
		4,779,451		Ezawa et al.	10/1988	
		4,812,698		Chida et al.	03/1989	
		4,910,523		Huguenin et al.	03/1990	
		5,179,028		Valie et al.	01/12/1993	
		5,191,791		Gerardi et al.	03/1993	
		5,201,215		Granstaff et al.	04/1993	
		5,224,174		Schneider et al.	06/1993	
		5,253,530		Letcher, III	10/1993	

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		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
			EP 0102490		Bopp & Reuther GMBH	03/14/1984		
			EP 0282251		Schlumberger Electronics	09/14/1988		
			EP 0676638		Tektronix, Inc.	10/11/1995		
			WO 99/51980		Symyx	10/14/1999		
			WO 00/67086		Symyx	11/09/2000		
			WO 99/18431		Symyx	04/15/1999		
			GB 2187286		Hatschek	09/03/1987		

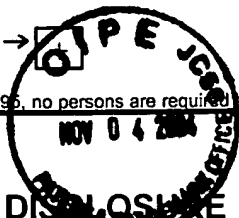
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		4,782,332		Cipris et al.	11/1/1988	
		4,970,492		King	11/13/1990	
		5,332,961		Hammerle	7/26/1994	
		5,434,650		Nakahara et al.	7/18/1995	
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		6,557,396		Ismail et al.	5/6/2003	
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		2002/0162390		Ismail et al.	11/7/2002	

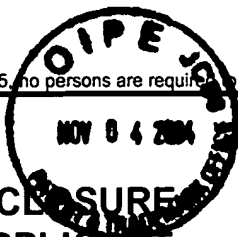
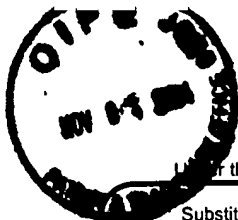
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		US- 2002/0162385	11/7/2002	Ismail et al.	
		US- 3,710,275	1/9/1973	Tanaka et al.	
		US- 4,549,427	10/29/1985	Kolesar, Jr.	
		US- 4,802,370	2/7/1989	EerNisse et al.	
		US- 5,334,900	8/2/1994	Kawashima	
		US- 5,445,008	8/29/1995	Wachter et al.	
		US- 6,286,363	9/11/2001	Discenzo	
		US- 6,644,095	11/11/2003	Van Mullekom et al.	
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Sheet 1 of 1

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<b>First Named Inventor</b>	Kolosov et al.
<b>Group Art Unit</b>	2855
<b>Examiner Name</b>	
<b>Attorney Docket Number</b>	1012-188

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		Number	Kind Code <sup>2</sup> (if known)			
		5,357,964		Spivey et al.	10/1994	
		5,375,470		Matsushima et al.	12/1994	
		5,454,045		Perkins et al.	09/1995	
		5,455,475		Josse et al.	10/1995	
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		6,182,499 B1		McFarland et al.	02/2001	
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		4,312,228		Wohltjen	01/26/1982	
		4,596,697		Ballato	06/24/1086	
		4,760,351		Newell et al.	07/26/1988	

**FOREIGN PATENT DOCUMENTS**

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		4,103,224		Taro et al.	7/25/1978	
		5,885,849		Di Stephano et al.	3/23/1999	
		5,792,938		Gokhfeld	8/11/1998	
		6,126,311		Schuh	10/3/2000	
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		6,327,890		Galipeau et al.	12/11/2001	
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		6,275,137		Doppalapudi et al.	8/14/2001	
		6,311,549		Thundat et al.	11/6/2001	
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		6,661,162		Nagai et al.	12/9/2003	
		5,325,704		Mariami et al.	7/5/1994	

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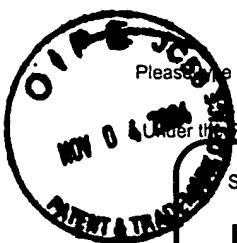
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Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
			EP 0813236		Kaldenberg	12/17/1997		
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<b>Application Number</b>	10/804,379
<b>Filing Date</b>	03-19-04
<b>First Named Inventor</b>	Kolosov et al.
<b>Group Art Unit</b>	2855
<b>Examiner Name</b>	
<b>Attorney Docket Number</b>	1012-188

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Application Number 10/804,379

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First Named Inventor Kolosov et al.

Group Art Unit 2855

Examiner Name

Attorney Docket Number 1012-188

## **OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS**

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		U.S. Application Serial No. 09/420,334 entitled "Graphic Design of Combinatorial Material Libraries" (Lacy, et al.) filed on October 18, 1999	
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		U.S. Application Serial No. 09/755,623 entitled "Laboratory Database System and Methods For Combinatorial Materials Research" (Dorsett, Jr., et al.) filed on January 5, 2001.	
		The family of applications for U.S. Patent Application Serial No. 09/174,856 titled "Graphic Design of Combinatorial Material Libraries" (Lacy, et al.) filed on October 19, 1998.	
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		U.S. Patent Application Serial No. 09/580,024 entitled "Instrument for High Throughput Measurement of Material Physical Properties and Method of Using the Same" filed on May 26, 2000.	
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Group Art Unit	2855
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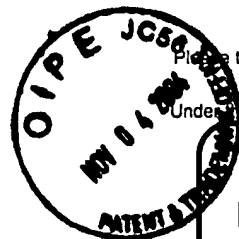
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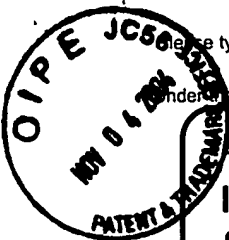
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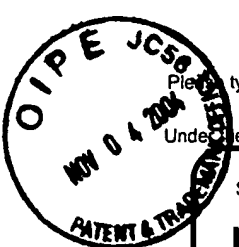
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Application Number 10/804,379

Filing Date 03-19-04

First Named Inventor Kolosov et al.

Group Art Unit 2855

Examiner Name

Attorney Docket Number 1012-188

### OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

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		"Theory of the Vibrating Tuning Fork Fluid Density Tool", www. lncs.ac.uk, page 1, accessed on May 7, 2003.	
		"A Vibrating Tuning Fork Fluid Density Tool", www. smithinst.ac.uk, page 1, accessed on February 2, 2004.	
		"SINIMS Oil and Gas Workshop", Draft: Notes of presentations and discussions, ICMS, Edinburgh, March 11, 2002.	
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		"SOS-Smart Oil Sensor", Impact Technologies, LLC.	
		Pamphlet by Kavlico-A Solectron Company, Capability Brochure Industrial Sensors and Transducers.	

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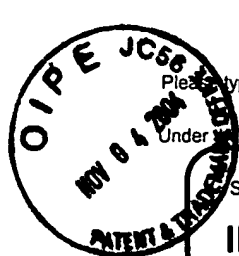
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		A&D Weighing, SV Series Users' Handbook V1.04E, pp. 1-40.	
		"EPSON presents the MC-30A: Reliable 32.768kHz Dedicated to Automotive Applications", August 25, 2003, www.epson.com, accessed on February 11, 2004.	
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		ZHANG et al, "Contributions of Amplitude Measurement in QCM Sensors", IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, Vol. 43, No. 5, September 1996, pp. 942-947.	

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		SMITH et al., Water Sorption Isotherms and Enthalpies of Water Sorption by Lysozyme Using the Quartz Crystal Microbalance/heat Conduction Calorimeter, BIOCHIMICA et BIOPHYSICA ACTA, October 4, 2001, pages 150-159.	
		ULBRICHT, Helmar, Crimpen-eine ausgereifte AnschluBtechnik	
		International Search Report dated 8/4/2004, PCT/US2004/008552	
		Zeisel et al., A PRecise and Robust Quartz Sensor Based on Tuning Fork Technology for (SF6)- Gas Density Control, Elsevier Sciences, 2000	

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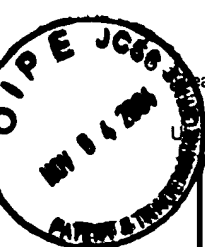
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		J.W. Grate, et al, "Smart Sensor System for Trace Organophosphorus and Organosulfur Vapor Detection Employing a Temperature-Controlled Array of Surface Acoustic Wave Sensors, Automated Sample Preconcentration, and Pattern	
		"Viscosity and Density Sensing with Ultrasonic Plate Waves, B.A. Martin, S.W. Wenzel, and R.M. White, Sensors and Actuators, A21-A23 (1990), 704-708	
		"On-line Sensor for Density and Viscosity Measurement of a Liquid or Slurry for Process Control in the Food Industry" Margaret S. Greenwood, Ph.D. James R. Skorpik, Judith Ann Bamberger, P.E. Sixth Conference on Food Engineering, 1999 AIChE Annual Meeting, Dallas, Texas	
		"Micromachined viscosity sensor for real-time polymerization monitoring", O.Brand, J.M. English, S.A. Bidstrup, M.G. Allen, Transducers '97, 121-124 (1997)	
		"Frequency response of cantilever beams immersed in viscous fluids with applications to the atomic force microscope", J.E. Sader, J. Appl. Phys. 84, 64-76 (1998)	
		"Resonance response of scanning force microscopy cantilever", G.Y. Chen, R.J. Warmack, T.Thundat, and D.P. Allison, Rev. Sci. Instrum. 65, 2532-2537(1994)	
		"Lecture notes on shear and friction force detection with quartz tuning forks" Work presented at the "Ecole Thématique du CNRS" on near-field optics, March 2000, La Londe les Maures, France by Khaled Karrai, Center for	
		J. Sorab, G.S. Saloka: "Engine Oil Viscosity Swnsors Using Disks of PZT Ceramic as Electromechanical Vibrators" Society of Automotive Engineers SAE, no. 971702, 1997	
		E. Bohmer, "Elemente der angewandten Elektronik", August 1978, with English translation	

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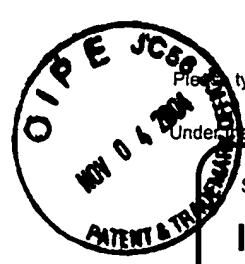
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		Zhang et al.: "Determination of Liquid density with a low frequency mechanical sensor based on quartz tuning fork" Sensors and Actuators B, Elsevier Sequoia S.A. Lausanne, CH. vol. 84, no. 2-3, May 15, 2002, pages 123-128.	
		Shih et al.: "Simultaneous Liquid Viscosity and Density Determination with Piezoelectric Unimorph Cantilevers: Journal of Applied Physics, American Institute of Physics. New York, U.S., vol. 89, no. 2, January 15, 2001, pages 1497-1505.	
		Dring et al.: "Integrated on-line multisensing of fluid flow using a mechanical resonator" Sensors and Actuators A, Elsevier Sequoia S.A., Lausanne, CH, vol. 85, no. 1-3, August 25, 2000, pages 275-279.	
		International Search Report dated March 22, 2004 (PCT/US03/32982) 1012.183WO	
		International Search Report dated December 12, 2003 (PCT/US03/12503) 1012.171WO	
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		"Sensors and Actuators, INTELLEK Oil Condition Sensor", DELPHI Energy and Chassis Systems.	
		MURAMATSU et al., "Viscosity Monitoring with a Piezoelectric Quartz Crystal and Its Application to Determination of Endotoxin by Gelation of Limulus Amebocyte Lysate", March 8, 1988.	
		LANGDON, "Vibratory Process Control Transducers", The Marconi Review, Third Quarter, 1980, pp 156-175.	
		Invitation to Pay Additional Fees, PCT/US03/32983, mailed April 8, 2004. (1012.192WO)	

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